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"This substantive policy statement is advisory only. A substantive policy statement does not include internal procedural documents that only affect the internal procedures of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules made in accordance with the Arizona Administrative Procedure Act. If you believe that this substantive policy statement does impose additional requirements or penalties on regulated parties you may petition the agency under A.R.S. §41-1033 for a review of the statement."

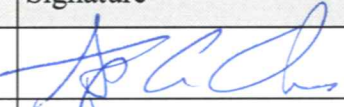


AIR QUALITY EXCEPTIONAL AND NATURAL EVENTS POLICY	Policy Number	2009.001
	Revision No.	001
	Effective Date	

1.0 Revision History

## 1.1 Revision Table

Date	Rev. No.	Change	Ref. Section
[date approved]	001	Reformat and revise	0159.000
April 28, 1999	000	New Policy Drafted	n/a

## 1.2 Approval Signatures

Title	Name	Signature	Date
Director	Stephen A. Owens		1/10/06
Deputy Director	Patrick J. Cunningham		1/10/06
Affected Division Director(s)	Nancy C. Wrona Air Quality		12/12/05
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## 2.0 Purpose

This policy sets forth the requirements and procedures that are to be followed in the event of occurrences of air quality exceptional, fire, and natural events in Arizona that should be excluded from determination of compliance with the National Ambient Air Quality Standards (NAAQS) or determination of eligibility for the Limited Maintenance Plan (LMP) Option. Information contained herein includes a review of the statutory requirement, definitions of terms used in the policy, brief descriptions of existing U.S. Environmental Protection Agency (EPA) exceptional and natural air quality event policies and fire policies usable for ADEQ policy development, roles and responsibilities in the air quality regulatory process, and the procedures for determining the occurrence of these events. The Technical Criteria Document for Determination of Natural and Exceptional Events in Arizona (TCD) sets forth specific criteria for evaluation.

## 3.0 Persons Affected

- 3.1 General Public
- 3.2 Sources of air pollution
- 3.3 State and local government entities

## 4.0 Policy

The policy of ADEQ is to ensure that:

- 4.1 The substantive policy statements required by A.R.S. § 49-424, paragraph 3, for identifying air quality exceptional events that take into consideration Arizona's unique geological, geographical and climatological conditions and other unusual circumstances are developed and updated as appropriate with the planning agency, certified pursuant to A.R.S. § 49-406, and the county air pollution control department or district.

Procedural and substantive requirements are met to exclude certain ambient air monitoring data from consideration by EPA in its determinations concerning attainment of the NAAQS, designations and classifications of air quality planning areas, and its determinations of LMP Option eligibility when control measures would not have prevented exceedance of NAAQS or LMP eligibility criteria; and that the public is educated and notified in advance of expected elevated air pollutant concentrations to enable them to minimize exposure to air pollutants, in accordance with EPA's Exceptional Events Policy, Natural Events Policy, and Fire Policies.

The TCD is updated periodically.

- 4.2 Arizona Geographic, Geological and Climatological Conditions.

Arizona land forms reside in the Basin and Range and Colorado Plateau physiographic province classifications. In general terms, the northeastern 40 percent of the State is the Colorado Plateau, and the remaining 60 percent of the State's land area is defined as Basin and Range. The Mogollon Rim, an escarpment of approximately 1,000 to 1,500 feet of vertical relief, defines the boundary between the two province classifications, tending to the west-northwest from the center of the eastern State boundary with New Mexico. Elevations range from more than 12,000 feet above sea level on mountaintops near Flagstaff to the 7,000 foot level for the Colorado Plateau, and descending to the



lowest point around 100 feet above sea level near Yuma in the southwestern corner of the State.

Arizona climatology is characterized by the potential for extremes, especially of temperature and precipitation. High temperatures above 105 degrees Fahrenheit are common in the low deserts in the summer. Low temperatures near zero degrees Fahrenheit are common in the high-elevation mountains during winter months. An entire month can pass without measurable precipitation during the desert summer, while nearly 12 inches of rain have been measured in a single 24-hour period in the Sierra Ancha mountain range of central Arizona. Wind conditions in the deserts are generally light and variable, with distinct episodes of increased wind speed when dry cold fronts move through in the spring, or as a result of thunderstorms during the summer monsoon season. Short-term high wind events called haboobs, which create moving walls of dust that overwhelm controls of anthropogenic sources of dust, can occur as early as late June; an increased probability of these transitory events can persist into mid-September. Wind speeds are higher on average on the Colorado Plateau, but strong atmospheric temperature inversion or stagnation conditions can persist for several days at a time across all or part of the State.

## 5.0 Definitions

- 5.1 **Air Quality Exceptional Events:** Specific events defined in the EPA Exceptional Events Policy that have a clear causal connection to elevated air pollutant concentrations, that are not expected to recur routinely, that cannot reasonably be controlled using the State Implementation Plan (SIP) process, and that can be excluded from consideration in determinations of attainment of the NAAQS, designations and classifications of air quality planning areas, or eligibility for the LMP Option, upon the concurrence of EPA.
- 5.2 **Air Quality Natural and Exceptional Events Stakeholder Groups:** A group of Arizona-based stakeholders that met three times during 1997-1998 to fulfill a statutory mandate to draft the original ADEQ policy on natural and exceptional air quality events. A second group of Arizona-based stakeholders, which met six times during 2005-2006, provided input on revising the TCD and this policy.
- 5.3 **Air Quality Natural Events:** Events defined in the EPA Natural Events Policy or the TCD that have a clear causal connection to elevated air pollutant concentrations, that are not expected to recur routinely and that cannot reasonably be controlled using the SIP process but are to be addressed by a Natural Event Action Plan, and that can be excluded from consideration in determinations of attainment of the NAAQS, designations, and classifications of air quality planning areas or eligibility for the LMP Option, upon the concurrence of EPA.
- 5.4 **Best Available Control Measures (BACM):** BACM are defined by EPA as techniques that achieve the maximum degree of emissions reduction from anthropogenic sources of air pollutants as determined on a case-by-case basis considering technological and economic feasibility (59 FR 42010; August 16, 1994).
- 5.5 **Data Flag:** EPA's Exceptional Events Policy, Fire Policies, and Natural Events Policy require the State or County Air Pollution Control Department or District to enter a special code from a list of natural or exceptional event data flags into EPA's Aerometric

Information Retrieval System (AIRS) database no later than six months after the date of the exceedance of the NAAQS or the LMP eligibility criteria, after which EPA has an opportunity to concur or decline to concur.

- 5.6 **Exceedance:** Ambient air quality concentrations that exceed either the NAAQS or the LMP eligibility criteria.
- 5.7 **Exceptional Events Policy (EEP):** EPA's Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events (EEP), EPA-450/4-86-007, July 1986, available at [www.epa.gov/ttn/amtic/files/ambient/criteria/reldocs/4-86-007.pdf](http://www.epa.gov/ttn/amtic/files/ambient/criteria/reldocs/4-86-007.pdf). According to the Natural Events Policy (NEP), beginning January 1, 1994, the EEP is still applicable to exceptional anthropogenic events.
- 5.8 **Guidance on Assessing the Impacts of May 1998 Mexican Fires on Ozone Levels in the United States (Fire & Ozone Policy):** EPA Memorandum from John S. Seitz, Director, EPA Office of Air Quality Planning and Standards, dated November 10, 1998, to EPA Regional Administrators concerning smoke plumes from severe fire incidents in Mexico and Central America that impacted peak ozone levels in the southwestern United States available at [www.epa.gov/ttn](http://www.epa.gov/ttn) under Ozone Implementation. This guidance refers to Clean Air Act Sections 179B(b), 181(a)(2) and (a)(5), and 185.
- 5.9 **Interim Air Quality Policy on Wildland and Prescribed Fires (Fire Policy):** EPA Memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators dated May 15, 1998, available at [www.epa.gov/ttn/oarpg/tl/memoranda/wilson.pdf](http://www.epa.gov/ttn/oarpg/tl/memoranda/wilson.pdf). This policy allows data to be flagged to note that the data were affected by fire, but the data will still be used to determine the design value and attainment status. A State that is addressing wildland and prescribed fires with a Smoke Management Program is eligible to submit a LMP for an area that is otherwise ineligible for the LMP Option solely as a result of fire-affected data.
- 5.10 **Limited Maintenance Plan (LMP):** EPA's Memorandum entitled Limited Maintenance Plan Option for Moderate PM<sub>10</sub> Nonattainment Areas from Lydia Wegman, Director, EPA Air Quality Strategies and Standards Division, issued August 10, 2001, to the Regional Offices' Air Program Division Directors available at [www.epa.gov/ttn/oarpg/tlpgm.html](http://www.epa.gov/ttn/oarpg/tlpgm.html). This option streamlines planning requirements by waiving some air quality modeling and analysis.
- 5.11 **National Ambient Air Quality Standards (NAAQS):** Health-based standards that specify maximum acceptable levels of air pollutants in the ambient air. EPA has promulgated NAAQS for carbon monoxide (CO), nitrogen oxides, lead, sulfur dioxides, ozone, and particulate matter.
- 5.12 **Natural Events Policy (NEP):** EPA's memorandum entitled Areas Affected by PM<sub>10</sub> Natural Events, addressed to EPA Regional Offices' Air Division Directors on May 30, 1996, retroactive to January 1, 1994, available at [www.epa.gov/ttn/oarpg/tl/memoranda/nepol.pdf](http://www.epa.gov/ttn/oarpg/tl/memoranda/nepol.pdf). It interprets Clean Air Act Section 188(f) and Appendix K to Title 40 CFR Part 50 and supersedes sections of the EEP related to natural events beginning January 1, 1994. The NEP instructs EPA to acknowledge receipt of the documentation and concur, or decline to concur, with the natural event data flag within 60 days after receipt.



- 5.13 **Natural Events Action Plan (NEAP):** The NEAP required by the NEP, which the State or County Air Pollution Control Department or District must formulate and submit to EPA within 18 months after the date of the air quality natural event, must include the following five elements:
- Public notification/education programs where the NAAQS are exceeded;
  - Maintenance of such programs to minimize public exposure to such events in the future;
  - Abatement or minimization strategies for appropriate, contributing, controllable sources using BACM;
  - Study, identification and implementation of practical mitigating measures as necessary; and
  - A commitment to re-evaluate the NEAP and its effectiveness and revise as appropriate at least every 5 years.
- 5.14 **Policy on PM<sub>2.5</sub> Natural Events Issues (PM<sub>2.5</sub> Policy):** EPA's Memorandum with this title from Lydia Wegman, Director, EPA Air Quality Strategies and Standards Division, dated October 20, 2003, to the Regional Offices' Air Program Division Director available at [www.epa.gov/ttn](http://www.epa.gov/ttn). This policy makes the EEP, NEP, and Fire Policies applicable to PM<sub>2.5</sub> events.
- 5.15 **State Implementation Plan (SIP):** Plan prepared pursuant to Clean Air Act Section 110 and Title 40 CFR Part 51 to attain and maintain the NAAQS.

## 6.0 Responsibilities

- 6.1 ADEQ or the County Air Pollution Control Department or District shall follow the procedures outlined in this Policy to determine whether the EEP, LMP, NEP, Fire & Ozone Policy, Fire Policy, or PM<sub>2.5</sub> Policy apply to elevated concentrations of air pollutants within applicable deadlines.
- 6.2 ADEQ or the County Air Pollution Control Department or District shall schedule, provide public notice, and conduct meetings to present or discuss data or regulatory actions resulting from an event that is eligible for a data flag within applicable deadlines.
- 6.3 After making a technical demonstration that an exceedance meets criteria specified in the EEP, NEP, LMP, Fire & Ozone Policy, or Fire Policy and to qualify for exclusion from consideration in determinations of attainment of the NAAQS, designations and classifications of air quality planning areas, or eligibility for the LMP Option upon the concurrence of EPA, ADEQ or the County Air Pollution Control Department or District collecting and reporting ambient monitoring data for the air quality planning area eligible for a data flag shall appropriately flag data in the EPA AIRS database not later than 6 months after the air quality event or before any other applicable deadline.
- 6.4 ADEQ or the County Air Pollution Control Department or District shall provide ongoing public health and welfare event notification programs for future natural or exceptional or fire events, as practicable.
- 6.5 The planning agency(ies) certified pursuant to A.R.S. § 49-406 responsible for the area(s) where the monitored exceedance occurred shall contribute such technical and

scientific information as available, to assist ADEQ and/or the County Air Pollution Control Departments or District in conducting the analyses.

- 6.6 ADEQ or the County Air Pollution Control Department or District shall provide an annual report to a stakeholder group and others, with more frequent updates as needed.

## 7.0 Procedures

- 7.1 Trigger Mechanism: Elevated ambient air quality concentrations that occur during a candidate exceptional, fire, or natural event and that exceed any NAAQS or LMP eligibility criteria trigger the need to conduct an analysis to determine whether a data flag should be entered into AIRS.
- 7.2 Scope of Analysis: ADEQ or the County Air Pollution Control Department or District shall quality-assure ambient air monitoring data, analyze data, and compile credible evidence documenting a clear causal relationship, or the lack thereof, between the measured exceedance and the event that is alleged to have elevated ambient concentrations of the air pollutant(s). The analysis should consist of a weight of the evidence demonstration that may include scientific and technical data; air quality modeling and/or other numerical analyses of ambient monitoring data; evidence of contributing emission source characteristics; evidence of compliance with applicable air pollution control requirements by contributing anthropogenic sources, if any; evidence that BACM was or would have been overwhelmed by the event; meteorological information; satellite imagery; photographs; information from State or Federal agencies including the Arizona Department of Agriculture, Arizona Department of Transportation, Bureau of Land Management, EPA, National Forest Service, National Oceanic and Atmospheric Administration, and National Weather Service; evidence of a regional or international event; event-specific traffic count and/or land use activity data; and news media coverage of the event. Results of these analyses provide the basis for attributing the cause(s) of measured adverse ambient air quality conditions. Data collection and analysis procedures of ADEQ and EPA will be followed.
- 7.3 Technical Criteria Document: ADEQ has established technical criteria for identifying appropriate data and data sources and analysis of those data to define, study and provide a policy response to any Arizona Air Quality exceptional or fire or natural event that may occur. Within nine months after any revision of this policy, after review by the Air Quality Natural and Exceptional Events Stakeholder Group advising ADEQ on the formulation and revision of the TCD, ADEQ will review and revise the TCD. In addition, ADEQ will seek information and, to the extent feasible, maintain the following additional data:
- 7.3.1. Spatial and temporal soil characteristics and vegetation (plant coverage) inventories;
  - 7.3.2. Precipitation, wind speed, direction, persistence, and gust strength data, as well as meteorological scale circulation maps and satellite images;
  - 7.3.3. Definition of synoptic climatology categories and their associations with air pollution events;
  - 7.3.4. Ongoing analysis of ambient air pollution data trends for CO, ozone, particulate matter, sulfur dioxide, and nitrogen dioxide to ascertain the frequency and



magnitude of any exceptional events, fire events, and natural events in Arizona, including regional and international events that impact air quality in Arizona;

- 7.3.5. Ongoing collection and analysis of emission estimates and activity levels for emissions of these air pollutants from all source categories;
- 7.3.6. Information about transport of smoke from fires and causal connections to elevated ambient air concentrations of air pollutants;
- 7.3.7. Information about long range transport of dust, including dust from volcanic or seismic activity.

7.4 Analytical Procedures: When analysis is triggered under Section 7.1 of this policy, ADEQ or the County Air Pollution Control Department or District shall develop a written weight of the evidence analysis in accordance with this policy, following the analytical steps listed below, at a minimum:

- 7.4.1. Verification that an exceedance has occurred at one or more ambient air monitors in Arizona;
- 7.4.2. Evaluation of elevated ambient air concentrations of the same air pollutant(s) recorded at monitors in surrounding states or in Mexico to determine or rule out causal connection to a regional or international exceptional, fire or natural event;
- 7.4.3. Evaluation of surrounding anthropogenic sources of the same air pollutant(s) and compliance with required air pollution control measures immediately preceding and during the exceptional, fire, or natural event to determine, credibly estimate, or rule out air pollutant emissions attributable to them that may have contributed to the exceedance and to make appropriate compliance assistance and enforcement referrals;
- 7.4.4. Comparison of conditions and monitored air pollutant concentrations before and after the exceedance(s) in Arizona to the TCD and to the information compiled in accordance with Section 7.3 of this policy;
- 7.4.5. Identification, collection and evaluation of available satellite imagery, photographs, media coverage, and other credible information described in Section 7.2 of this policy to determine or rule out causal connection to an exceptional, fire or natural event;
- 7.4.6. Presentation of the draft weight of the evidence analysis to the Air Quality Natural Events Stakeholder Group for discussion and solicitation or additional relevant information and data before the applicable deadline for a data flag.
- 7.4.7. Revision of the weight of the evidence analysis based on stakeholder input.

#### 8.0 Additional Documentation:

8.1 Requests for EPA Concurrence with an Arizona Air Quality Natural or Exceptional or Fire Event Data Flag:

A request for EPA Concurrence with an Arizona Air Quality Natural or Exceptional or Fire Event Data Flag shall be prepared and submitted by ADEQ or the County Air Pollution Control Department or District, within applicable deadlines not later than six

months after the date of the event when the weight of the evidence analysis demonstrates a clear causal connection between an Air Quality Exceptional Event or an Air Quality Natural Event or a Fire Event and elevated air pollutant concentrations. Documentation submitted with the request shall conform with all applicable requirements.

#### 8.2 Draft NEAP Implementation Plan:

ADEQ or the County Air Pollution Control Department or District, in conjunction with the local planning agency certified pursuant to A.R.S. § 49-406, shall prepare a draft NEAP and present it to affected stakeholders for review and comment. ADEQ or the County Air Pollution Control Department or District, in conjunction with the local planning agency certified pursuant to A.R.S. § 49-406, shall submit the NEAP to EPA by the applicable deadline but not later than 18 months after the event. Consultation with EPA will be necessary to determine if only the first two elements of the NEAP are required for exceptional or fire events during which BACM would not reduce concentrations of air pollutants if a similar event occurred in the future. BACMs included in a submitted NEAP shall be included in the next sequential SIP revision for the area subject to the NEAP. A NEAP is not required for an event that exceeds LMP eligibility criteria but does not exceed a NAAQS.

#### 8.3 Public Meeting Presentation of Draft NEAP:

The draft NEAP Implementation Report shall be presented at a public meeting prior to submittal to EPA. ADEQ or the County Air Pollution Control Department or District shall provide an Annual Report to a stakeholder group and others summarizing events evaluated, events flagged and EPA concurrences or lack thereof, status of NEAP development and NEAP implementation, and events not eligible for a data flag.

#### 8.4 Final NEAP Submittal:

A NEAP Implementation Report shall be submitted to EPA not later than 18 months after the draft NEAP is required to be submitted to EPA by ADEQ or the County Air Pollution Control Department or District, in conjunction with the local planning agency certified pursuant to A.R.S. § 49-406.